

Homestead Dam Feasibility Study

Public Informational Meeting
May 27, 2004



Meeting Objectives

- To familiarize the public with the scope and schedule for the feasibility study
- To solicit input and information relative to the study, the dam and its surroundings



Meeting Agenda & Format

6:30–7:30 pm	Welcome & Overview
7:30–8:15 pm	Breakout Session
8:15–9:00 pm	Public Comment
9:00 pm	Adjourn

Project Partner Team

- NH Department of Environmental Services
- National Oceanic and Atmospheric Administration (NOAA) Restoration Center
- Town of Swanze
- US Fish and Wildlife Service
- NH Fish and Game Department

Purpose of Study

Study will address multiple issues of concern, and enable a well-informed decision on an alternative that meets three goals:

- 1) Attains dam safety
- 2) Restores up- and downstream fish passage
- 3) Ensures stability of Thompson Covered Bridge



Project Need

- ▶ December 1997 – DES Dam Safety inspection conducted
- ▶ July 1998 – Letter of Deficiency sent to dam owner. Need to repair or remove.
- ▶ September 1998 –
 - Dam owner wishes to remove dam
 - NH Fish and Game completes Plan for the Restoration of Migratory Fishes to the Ashuelot River Basin

Since Last Public Meeting

- ▶ June 2000: Public Information Meeting
- ▶ June 2001: DES River Restoration Coordinator Hired
- ▶ December 2001: DES Updates Board of Selectmen on Project Status
- ▶ Spring 2002:
 - DES Wetlands application expires
 - NH DOT commits funding to bridge studies

- ▶ January 2003: DOT Completes Study on Bridge. Report Provided to Town.

- ▶ June 2003: DES Begins Development of Study

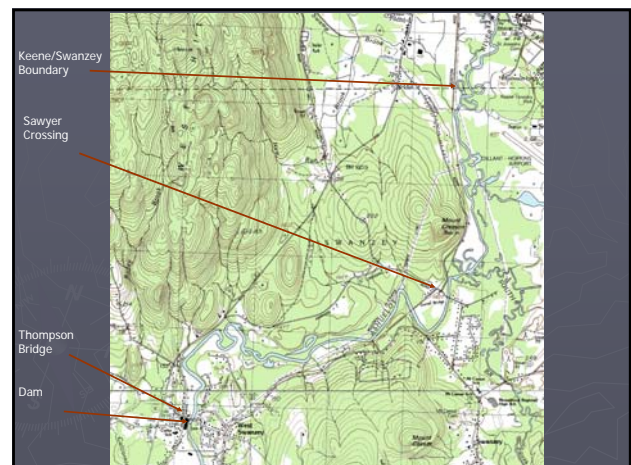
- Scope of focused on addressing outstanding concerns
- Town representative on Project Team
- Town assists in honing scope of study

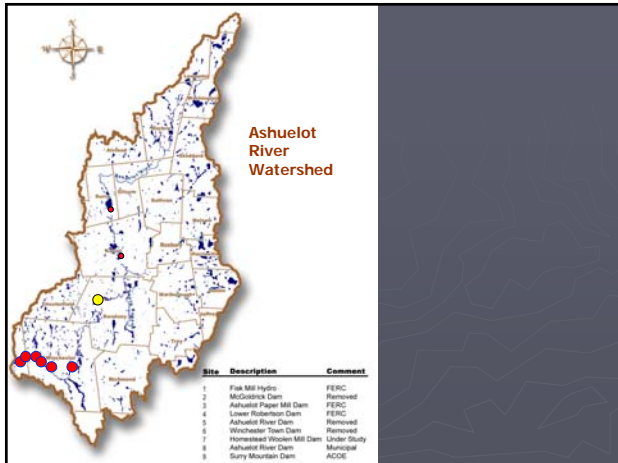
- ▶ Fall-Winter 2003-04: Consultant Selection
(conducted in accordance with RSA 21-I:22)



Homestead Dam Facts

- ▶ Timber Crib with Concrete Abutments
- ▶ Current Dam Built in 1910
- ▶ 10 ft high X 170 feet long
- ▶ 1998 inspection found deficiencies





Feasibility Study Outline

- Purpose & Need
- Existing Conditions
- Summary of Alternatives
- Impacts Analysis, by Alternative
- Costs Estimates, by Alternative
- Findings and Conclusions

Project Tasks

- Dam Inspection
- New Topographic Survey
- Historical Investigations
- HEC-RAS Model Refinement
- Fluvial Geomorphology
- Development of Project Alternatives
- Development of Bridge Alternatives
- Cost Analysis of Alternatives
- Impact Assessment
- Public Involvement



Range of Alternatives

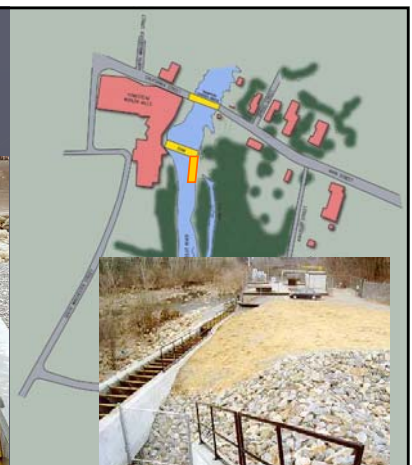
- Alternative A - No Action
- Alternative B1 – Maintain, w/ Denil Fish Ladder
- Alternative B2 – Maintain, w/ Bypass Channel
- Alternative B3 – Hydropower (w/ B1 or B2)
- Alternative C – Dam Removal, w/ Rock Ramp
- Alternative D – Full Removal

Alternative A: No Action

- Not feasible due to state dam safety concern
- Baseline for comparison



Alternative B1 Denil Fishway



Alternative B2 Bypass Channel



Alternative B3 Hydropower

- ▶ Studied in 1980s
- ▶ Determined not feasible
- ▶ Take a second look at potential economics
- ▶ Would require fish passage



Alternative C Removal with Rock Ramp



Alternative D Full Removal



Thompson Covered Bridge

- ▶ Scour analysis completed 2003
- ▶ Center pier is in poor condition, susceptible to scour
- ▶ Foundation reconstruction recommended with either dam removal or retention
- ▶ Task: Advance the conceptual design & cost estimate

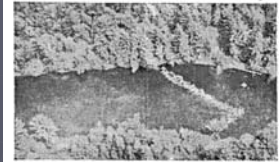
Hydraulic Modeling

- ▶ HEC-RAS (Existing Data and Model)
- ▶ Supplies information to:
 - Scour analysis
 - Sediment management
 - Hydrogeological analysis (wells)
 - Potential floodplain forest effects
 - Fish weir effects

Historic Resources

- ▶ West Swanze Village Historic District (Eligible 1995)
- ▶ 1832 Thompson Covered Bridge (NRIND 1980)
- ▶ Archeological: Whipple Site and Fish Weir
- ▶ Section 106 NHPA – Consulting Party Status

Low Water Reveals Indian Dam On Ashuelot River In Swanze



INDIAN DAM: This aerial view shows a V-shaped dam built by the Indians on the Ashuelot river downstream from the covered bridge in Swanze Center. Mentioned in the Swanze town history, the dam is rarely exposed to view.

By JACK TERHAN
A landmark of Indian culture is clearly visible from the river more this week when the old Indian dam on the Ashuelot river in Swanze was exposed.

The stream level was lowered when gates were opened at the Homestead Woolen Mills dam in West Swanze.

Seen only by a few county residents due to its remote location, several hundred yards from the nearest highway, the V-shaped structure, almost hidden by old grass, is mentioned in the Swanze town history and was built before the early settlers arrived.

Constructed with boulders, the dam points downstream in a long V. The stream is about 100 feet wide at that point.

The apex of the V is open and it is believed that it was a favorite Indian fishing spot. A flat boulder was located below the dam and was probably used as a platform for the spearing of salmon in the stream as they came through the opening in the dam.

A score of Indian fireplaces were pointed up near the dam in the 18th century, indicating that a small village was located in the area. River stones were used to build the fireplaces inside wigwags.

July 12th 1950

Water Supply

- ▶ Residential Wells
- ▶ Fire Suppression
- ▶ Natural Resources



Visual Resources



Downstream Free Flowing Reach



Upstream Impounded Reach

Public Involvement

- ▶ Advisory Group Meetings
- ▶ Public Information Meetings
- ▶ Consulting Party Status (National Historic Preservation Act)

ADVISORY GROUP attendees of May 13th meeting

Bob Beauregard	Town of Swanze Selectman
Beth Fox	Town of Swanze Administrator
Doug Brown	Dam owner, Homestead Woolen Mills
Pablo Fleischmann	Ashuelot River Local Advisory Comm.
Edna Feighner	NH Division of Historical Resources
Richard Scaramelli	Swanze Master Plan Committee
Scott Self	Swanze Planning Board
Lee Dunham	Swanze Dept. of Public Works
William Snyder	North Swanze Water & Fire Precinct
Fred R. Pitcher	North Swanze Water & Fire Precinct
Bruce Bahannon	Swanze Emergency Management
Sara Carbonneau	Swanze Town Planner
Sylvester Karasinski	Interim Chief/Swanze Fire Department
Mike Morrison	Swanze Construction Commission
Tom Warner	Ashuelot Race Organization

Key Dates (Target)

May 13	Advisory Group Meeting
May 27	First Public Information Meeting
June 2	Progress Report
June 7	HEC Model Complete
July 21	Progress Report
August 16	Dam Inspection Report
September 16	Second Advisory Group Meeting
October 4	Second Public Information Meeting
October 29	Final Feasibility Study

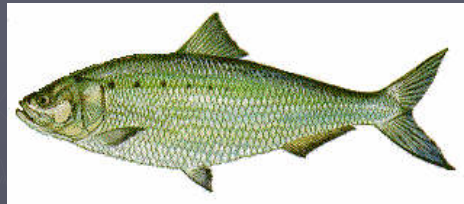
Making a Decision

- ▶ Study will result in range of alternatives and feasibility assessment for those alternatives
- ▶ DES Dam Safety will require decision by March 2005
- ▶ Dam owner can either pursue removal or transfer dam ownership to another party

Homestead Dam Feasibility Study

Information Stations

- ▶ Historical Resources
- ▶ Thompson Covered Bridge
- ▶ Fisheries & Restoration
- ▶ Ashuelot River Local Advisory Committee
- ▶ Dam Safety



www.des.nh.gov/dam/damremoval

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